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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,919	07/21/2000	Henry Samueli	39966/LTR/B600	4027

7590 01/26/2005

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EXAMINER

LEE, CHI HO A

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application N .

09/620,919

Applicant(s)

SAMUELI ET AL.

Examiner

Andrew Lee

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 145-148, 150, 151, 163-170 and 172-220 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 192-220 is/are allowed.
- 6) ☒ Claim(s) 145-148, 150, 151, 163-170 and 172-191 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 145-148, 150, 151, 163-170, 172-191 are rejected under 35 U.S.C. 102(e) as being anticipated by LeFever U.S. Patent Number 4,599,732.

Re Claims 145, 163, 167, 176, 188, 190, fig. 2 teaches A/D converter 31 that converts multi-level analog input signal to digital signals in accordance to the determined sampling rate (NCO rate); Control Processor and Timing 41 (a timing recovery circuit) for controls adjusting (shifting the phase) the NCO rate (a clock having a phase) associated with the A/D converter; Equalizer 34 for identifying one of the digital information signal (See col. 4, lines 23 +).

Re Claims 146, 168, refer to Claim 145, AGC 22 coupled to 31.

Re Claims 147, 166, 169, 178, refer to Claim 145, 34 coupled to Decoder 42.

Re Claims 148, 150, 170, 173, 174, refer to Claim 145, 42 coupled to 41 (media access controller) and also performs timing recovery for the A/D converter 31 by regulating the NCO clock rate (See col. 9, lines 25-32).

Art Unit: 2663

Re Claims 151, 165, 175, 189, refer to 145, at least one pair of twisted wire at a transmission rate of at least 25 megasymbols per second refers to the intended use and will not be given patentable rate.

Re Claims 179-180, 182-183, 185-186, refer to Claim 145, Control Processor 41 controls the synchronization of the received digital signal (timing digital signals) and also controls the sampling rate of the A/D converter (information digital signals).

Re Claims 181, 184, 187, refer to Claim 145, wherein the A/D converter inherently is associated with at least two analog levels, i.e., binary 1, 0.

Re Claims 164, 172, 177, 191, refer to 148, wherein the correlator/detector performs product of a plurality of sampled signals.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 149, 171 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeFever U.S. Patent Number 4,599,732 in view of Measor et al U.S. Patent Number 5,699,386.

Re Claims 149, 171, LeFever fails to explicitly teach the equalizer comprising a Feed forward equalizer, a data slicer, and a decision feedback equalizer. However, Measor et al teaches an equalizer comprising of above components. One skilled in the art would have been motivated to modify the equalizer with an equalizer of Measor et al

Art Unit: 2663

due to commercial availability. Therefore, it would have been obvious to one ordinary skilled to modify the equalizer of LeFever with equalizer of Measor et al.

***Response to Arguments***

5. Applicant's arguments with respect to claims 145-148, 150, 151, 163-170, 172-191 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

6. Claims 192-220 are allowed.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

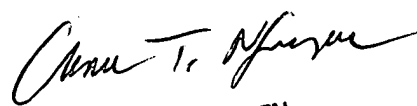
Art Unit: 2663

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-571-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AI  
1/23/05

  
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